



Our reference: 010-00-012

**COMBINED DECLARATION AND POWER OF ATTORNEY**

As a below-named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **Human-Computer Interface Including Haptically Controlled Interactions**, the specifications of which (check one)

  x   is attached hereto

           was filed on                      as Serial No.                      and was amended on                      (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing date (MM/DD/YYYY)	Priority not claimed	Certified copy attached? (YES/NO)

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

Provisional application filing number	Filing date
60/202,448	05/06/2000

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent filing date (MM/DD/YYYY)	Parent patent number (if applicable)
08/834,642	04/14/1997	

**HUMAN-COMPUTER INTERFACE INCLUDING HAPTICALLY CONTROLLED INTERACTIONS**

This invention was made with Government support under Contract DE-AC04-94AL85000 awarded by the U. S. Department of Energy. The Government has certain rights in the invention.

**PRIORITY CLAIM**

This application claims the benefit of U.S. Provisional Application 60/202,448, filed on 05/06/2000, and U.S. Patent Application 08/834,642, filed on 4/14/1997, both incorporated herein by reference.

**BACKGROUND OF THE INVENTION**

[0001] This invention relates to the field of human-computer interfaces, specifically those relating to methods of intuitively controlling interactions such as scrolling and zooming.

[0002] Computing technology has seen a many-fold increase in capability in recent years.

Processors work at ever higher rates; memories are ever larger and faster; mass storage is larger  
5 and cheaper every year. Computers now are essential elements in many aspects of life, and are often used to present three dimensional worlds to users, in everything from games to scientific visualization.

[0003] The interface between the user and the computer has not seen the same rate of change.

Screen windows, keyboard, monitor, and mouse are the standard, and have seen little change

10 since their introduction. Many computers are purchased with great study as to processor speed, memory size, and disk space. Often, little thought is given to the human-computer interface, although most of the user's experience with the computer will be dominated by the interface (rarely does a user spend significant time waiting for a computer to calculate, while every interaction must use the human-computer interface).